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Materials Used in 1961 AUTOMOBILE INTERIORS AND CONVERTIBLE TOPS

A Preliminary Report

Standards and Research Division
Statistical Reporting Service
U. S. DEPARTMENT OF AGRICULTURE

PREFACE

This report deals with industrial consumption of cotton and other materials used in the interior of passenger cars. The Special Surveys Branch of the Standards and Research Division, Statistical Reporting Service, assumed major responsibility for the study.

The project was under the general direction of Trienah Meyers. Stewart, Dougall and Associates, Inc., of New York, N. Y., under contract with the Department, developed the questionnaire, conducted the survey, and prepared a draft of the report.

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MATERIALS USED IN 1961 AUTOMOBILE INTERIORS
AND CONVERTIBLE TOPS

A Preliminary Report

By Harold R. Linstrom and Carle P. Graffunder
Standards and Research Division
Statistical Reporting Service

Introduction

A survey was made of materials used in selected parts of 1961 automobile interiors. Data were collected on quantities of these materials used by the auto industry and also on the opinions and preferences of the auto industry for such materials. This survey was designed to determine changes in kind and volume of materials used since 1955, and reasons for changes.

This is a followup to comparable studies on the 1950 and the 1955 model years. 1/ In general, the design of the present study was like that of the earlier ones. One difference allowed for separate treatment of compact cars, which were not an important item in 1955 United States production but which accounted for over one-third of the total number of automobiles produced in 1961.

This preliminary report is limited to total volume of materials used in standard and compact auto interiors--1961 compared with 1955. A final report on this survey will include the detail on compact cars and industry preference for materials used in automobile interiors. Since this report is being released prior to final analysis and review, the 1961 data are subject to revision.

Automobile Production in 1955 and 1961

Nearly 8 million passenger cars were produced in 1955. Production in 1961 dropped to about 5-1/2 million. Differences in poundage figures for materials used in auto interiors are a reflection, in part, of the sizable difference in level of production between the two periods and the large production (nearly 2 million) of compact cars.

1/ Jacobs, Milton. Fabrics and Fibers for Passenger Cars, Automobile Manufacturers Views, 1955 Compared with 1950. U. S. Dept. Agr., Mktg. Res. Rpt. 152, April 1957.

U. S. Bureau of Agricultural Economics. Automobile Manufacturers Discuss Fabrics and Fibers for Passenger Cars. U. S. Dept. Agr., Agr. Inform. Bul. 45, Oct. 1951.

Changes in Fabric Consumption Between 1955 and 1961

Cotton's percentage share of the materials used in passenger car interiors was about the same compared with 1955. Its position declined in sidewalls and headlinings and gained in seat padding (table 1).

Sidewall.--In the sidewall market, cotton dropped from a 1955 leadership position in which it accounted for 50 percent of the volume used, to only 9 percent in 1961. A number of materials--largely vinyls, paper, foam and sponges, and asphalt--accounted for most of this loss.

Hard-backing materials have been used for many years within the sidewalls of passenger car interiors, but before 1958 the surface material was not bonded to the hard back and in previous studies manufacturers reported only the covering, not the back which they considered as a separate item. Since then a technological innovation, electrolytic bonding of plastics directly to hardboards, has come into wide use. As a result of this innovation, the auto industry in 1961 included hardboard as part of the materials consumed in the interior of cars. To preserve comparability with the 1955 study, hardboard is excluded from the major tables on materials (tables 1 and 2) and is presented separately (table 3).

Headlining.--Although cotton remained the volume leader among the materials used in headlinings, its share of this market dropped sharply. In 1961, cotton accounted for 49 percent of the fabric poundage used in headlinings. In 1955, its share was 76 percent (table 1).

Vinyl accounted for over one-fourth of the poundage used in headlinings in 1961 cars. Some of this vinyl was not electrolytically bonded, in which case it was generally backed with cotton. Paper (table 1) and hardboard (table 3) were the only other materials reported in significant volume for headlinings.

Upholstery.--In 1961, cotton-backed vinyl was the leading material used for upholstery. Vinyl accounted for 46 percent of the total poundage consumed, cotton backing for 20 percent. The only other fabrics reported in volume were rayon and nylon, each of which accounted for about 10 percent of upholstery (table 1).

Seat padding.--Cotton continued as the leading material used for seat padding. In 1961, it accounted for 70 percent of the materials for this use, an increase of about 10 percentage points over its 1955 share (table 1). Foam and sponge products ranked second with 16 percent, and the "burlap, sisal, jute" category ranked third with 11 percent.

Sheeting.--Cotton remained almost the only fiber used for sheeting. Over 90 percent was cotton in 1961. Its nearest competitor was jute which, in the 1961 model year, accounted for 6 percent of total sheeting poundage (table 1).

Convertible tops.--Although there was a decrease in total automobile production between 1955 and 1961, more convertibles were made during the 1961 model year than in 1955--300,472 as compared with 197,291. With the increase

Table 1.--Materials purchased for upholstery, seat padding, and foundation sheeting in 1961 and 1955 passenger cars as percentage of total used in each part

[illegible]

Table 2.--Materials purchased for upholstery, sidewall, headlining, seat padding, and foundation sheeting in 1961 passenger cars

Materials	Upholstery	Sidewall	Headlining 1/	Seat padding	Sheeting	Total poundage excluding seat padding	Total poundage including seat padding
	<u>Pounds</u>	<u>Pounds</u>	<u>Pounds</u>	<u>Pounds</u>	<u>Pounds</u>	<u>Pounds</u>	<u>Pounds</u>
Cotton -----	14,571,507	3,201,255	5,499,295	126,570,702	4,156,237	27,428,294	153,998,996
Backing -----	11,001,602	3,050,824	3,795,377	---	---	17,847,803	17,847,803
All other -----	3,569,905	150,431	1,703,918	126,570,702	4,156,237	9,580,491	136,151,193
Vinyl -----	25,274,842	17,750,159	3,237,568	1,827,658	2,974	46,265,543	48,093,201
Foam and sponge -----	---	2,200,523	3,506	29,108,957	---	2,204,029	31,312,986
Burlap, sisal, jute -----	1,160,472	296,091	---	18,977,578	272,006	1,728,569	20,706,147
Rayon and acetate -----	5,394,110	1,033,859	99,591	2,549,497	---	6,527,560	9,077,057
Paper -----	936,917	7,214,487	2,126,607	182,405	---	10,278,011	10,460,416
Nylon -----	4,869,400	108,940	15,926	---	---	4,994,266	4,994,266
Asphalt -----	---	1,658,845	---	---	---	1,658,845	1,658,845
Leather -----	1,468,869	20,143	---	---	---	1,489,012	1,489,012
Wool -----	147,016	364,403	---	129,777	---	511,419	641,196
Aluminum foil, metallic yarn -----	128,059	935	---	---	---	128,994	128,994
Other manmade materials -----	85,537	10,200	223,163	116,849	---	318,900	435,749
Other -----	451,925	1,204,737	---	1,304,918	31,235	1,687,897	2,992,815
Total -----	54,488,654	35,064,577	11,205,656	180,768,341	4,462,452	105,221,339	285,989,680

1/ Excludes materials used in convertible tops.

Table 3.--Hardboard purchased for use in selected parts of the interiors of 1961 passenger cars

Interior part	All materials including hardboard	Hardboard	
	Quantity purchased	Quantity purchased	Percentage of all materials purchased
	<u>Pounds</u>	<u>Pounds</u>	<u>Percent</u>
Upholstery -----	54,669,943	181,289	*
Sidewall -----	72,725,758	37,661,181	52
Headlining -----	13,589,906	2,384,250	17
Seat padding -----	180,931,186	162,845	*
Total poundage ex- cluding seat padding-----	145,448,059	40,226,720	28
Total poundage in- cluding seat padding -----	326,379,245	40,389,565	12

*Less than 1 percent

Table 4.--Materials used in convertible tops of 1961 and 1955 passenger cars

Material	Quantity used		Percentage used	
	1961	1955	1961	1955
	<u>Pounds</u>	<u>Pounds</u>	<u>Percent</u>	<u>Percent</u>
Cotton -----	2,353,536	1,214,023	39	43
Vinyl -----	1,640,379	334,859	27	12
Latex <u>1/</u> -----	1,401,172	992,558	24	35
Jute -----	378,212	224,053	6	8
Polyethylene --	153,058	---	3	---
Nylon -----	39,910	---	1	---
Glass fiber ---	18,810	---	*	---
Rayon -----	15,510	44,919	*	1
Acrylic fiber	---	19,147	---	1
Total -----	6,000,587	2,829,559	100	100

*Less than 1 percent

1/ Latex and butyl in 1955

in production of convertibles between the two survey years, the consumption of cotton for soft tops nearly doubled. In 1961, quite unlike 1955, all the cotton went into backing for vinyl. This change in the use of cotton reflects a shift in emphasis from latex-bonded cotton tops to cotton-backed vinyl. Vinyl poundage increased about five times between the two periods. A few materials which were not reported in 1955--polyethelene, nylon, and glass fiber--appeared as minor factors in 1961 convertible tops (table 4).

Floor coverings.--No data on the volume of materials used for floor coverings were collected during the 1955 survey of the auto industry because fabric floor coverings were used mostly in the relatively few higher-priced, luxury passenger cars. However, data on this end-use were collected in 1961 because of the growing trend to a more general use of fabric rugs instead of rubber floor mats.

The most common floor covering in 1961 passenger cars was still rubber, which accounted for nearly one-half of the materials used. Jute, used almost exclusively as a backing material for carpets, ranked second in use. Some cotton also was used as a backing material but the amount was insignificant. Rayon accounted for 12 percent, the largest amount of surface material used in soft floor coverings (table 5).

Table 5.--Materials used in floor coverings of 1961 passenger cars

Material	Quantity used	Percentage used
	<u>Pounds</u>	<u>Percent</u>
Rubber -----	66,110,495	45
Jute -----	48,447,001	33
Viscose rayon and acetate	17,533,663	12
Latex (coating) -----	9,231,563	6
Burlap -----	2,179,574	1
Polyethylene -----	2,067,400	1
Nylon -----	1,299,022	1
Vinyl -----	821,470	1
Cotton backing -----	121,069	*
Total -----	147,811,257	100

*Less than 1 percent